Goal: Environmental Stewardship

Objectives

- Coordinate land use and transportation planning to better promote Smart Growth
- Preserve and enhance Maryland's natural, community, and historic resources
- Support initiatives that further our commitments to environmental quality

Performance Measures

MONITORING AGENCY	PERFORMANCE MEASURE	PAGE
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Maryland's transportation agencies strive to be good stewards of the environment by minimizing environmental impacts where they cannot be avoided and by restoring and improving environmental conditions where possible. For example, Maryland's transportation agencies have supported planting of over 500,000 new trees through the "One Million Trees" planting initiative. Minimizing and mitigating stormwater runoff is another way that Maryland's transportation agencies safeguard aquatic ecosystems and contribute to the Chesapeake Bay restoration effort.

The Smart, Green & Growing initiative serves as a guiding force for developing and managing the State's multimodal transportation network in a manner that complements the State's broader goals for sustainability and livability. For example, MDOT developed the Maryland Trails: Greener Way to Go initiative to promote trails as a healthy, environmentally-friendly travel option. MDOT is involved in ongoing dialogue about key environmental issues, including climate change, air quality, and energy, and how they will impact Maryland's future. MDOT is working toward implementing the Maryland Climate Action Plan, to achieve greenhouse gas (GHG) reductions through strategic actions and policies affecting transportation modes. MDOT is also involved in the Energy Outlook Task Force, which addresses options to increase transportation energy independence among others.

Key Initiatives

MDOT

- Smart, Green & Growing: Ensure that MDOT programs are sensitive to the environment and improve Marylanders' quality of life.
- Climate Change: Assist in evaluating adaptation and mitigation policy options for reducing Maryland's vulnerability to sea level change and GHG footprint.
- Transit-Oriented Development: Support the development of 14 designated TOD projects through technical assistance for planning and implementation, coordination with other state agencies and programs, infrastructure design and capital support, and facilitation and coordination of public-private partnerships.

MAA

- Energy Efficiency: Implement energy conservation measures resulting from the energy audit of BWI Marshall and Martin State facilities.
- Recycle Materials: Continue to recycle at least 20% of solid waste generated at both airports.
- Stormwater Management: Continue stormwater management procedures to limit the impact of stormwater from MAA property to the environment (e.g., inspect stormwater facilities and monitor water quality).

MPA

- Management Tool: Implement an Environmental Management System to support compliance with regulatory requirements.
- Recycle Materials: Continue to evaluate innovative reuse of dredged material (e.g., light weight aggravate, landfill cover). Also, continue the beneficial use of dredged material to restore wildlife habitat and create new recreational areas ($260.9 million for Dredge Material Placement and Monitoring in the FY2011-FY2016 CTP).
- Air Quality: Implement $3.5 million in American Recovery and Reinvestment Act (ARRA) funding from the Diesel Emissions Reductions program to clean air in and around the Port.

MTA

- Transit-Oriented Development: Support TOD opportunities at transit stations including MARC, Baltimore Metro, and Light Rail.
- Expand Service Offerings: Expand transit mobility by implementing the Corridor Cities Transit Way, the Purple Line, and the Red Line.
- Air Quality: Continue equipping all new buses with particulate traps on exhaust systems to catch up to 90% of all soot and particles.

MDTA

- Coordination: Utilize the newly established Environmental and Sustainability Oversight Committee (ESOC) to facilitate coordination of environmental efforts and initiatives across MDTA.
- Energy Efficiency: Explore the potential use of solar power for warning signs and bridge lighting.
- Recycle Materials: Utilizing Department of General Services contracts, developed and introduced an Authority-wide recycling program.

MVA

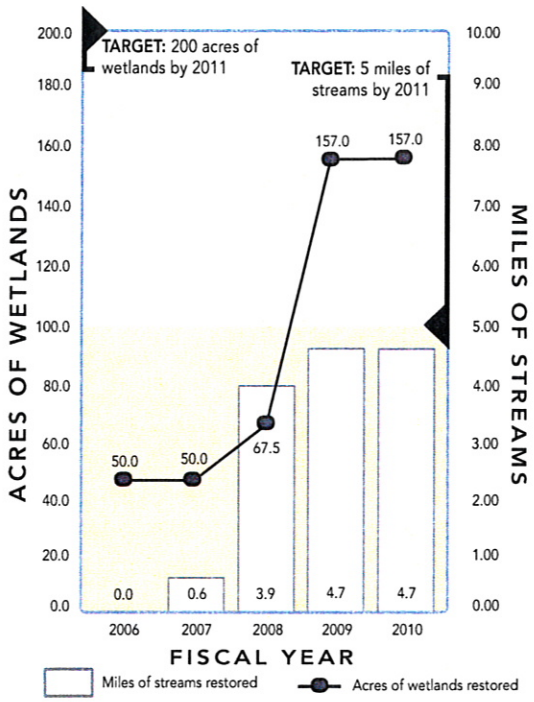
- Energy Efficiency: Launch initiatives to reduce energy consumption by 10% (e.g., install more efficient climate control systems).
- Air Quality: Continue the expansion of Internet services, which reduces trips to MVA offices.
- Air Quality: Continue the Vehicle Emissions Inspection Program to help the State meet national air quality standards.

SHA

- Sustainable Materials: Increase the use of recyclable materials in construction and promote the sustainable material specification to encourage environmental practices in construction.
- Fuel Consumption: Retrofit 100 dump trucks to further reduce fuel usage by the SHA fleet.
- Climate Change: Implement a Climate Change Program to identify roadway infrastructure that is vulnerable to flooding.

SHA: Acres of Wetlands Restored and Miles of Streams Restored

SHA wetland and stream restoration efforts exceed specific project environmental requirements. These efforts are intended to mitigate for past impacts to wetlands and streams due to highway construction projects. Providing wetlands are also among the most effective of SHA's water quality best management practices. SHA's efforts contribute to the Statewide goals of the Chesapeake 2000 Agreement and Maryland's Tributary Strategy Plan for the restoration of Chesapeake Bay. Through FY2010, 157 acres of wetlands have been restored towards SHA's overall goal of 200 acres by the close of FY2011. Due to a combination of budgetary constraints and inability to successfully negotiate agreements on easements or monetary compensation with private property owners, no stewardship wetland acreage was constructed in FY2010. However, a number of new projects totaling 31 acres are scheduled for construction in FY2011. SHA restored 300 linear feet (0.056 mile) of streams in FY2010, bringing the cumulative total to 4.72 miles toward the FY2011 goal of five miles.



Why Did Performance Change?

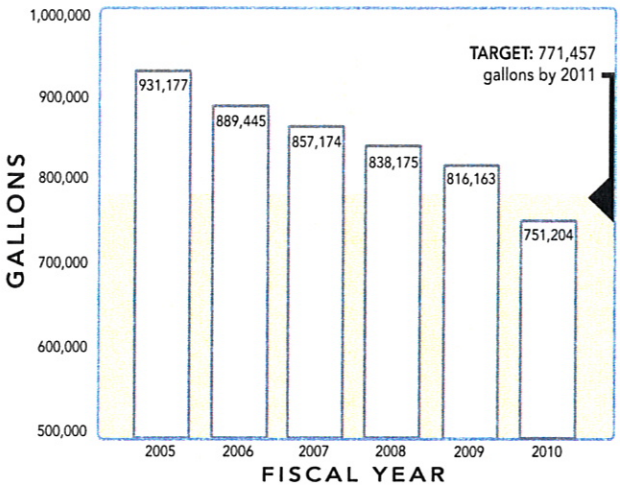
- No wetland acreage was added to prior year totals due to budgetary constraints and a lack of agreement on easements or compensation with private property owners
- Continued to focus on providing environmental enhancements above and beyond requirements
- 157 acres of wetlands have been created and 4.72 miles of streams restored
- 300 linear feet of streams were restored in FY2010

What Are Future Performance Strategies?

- Identify funding and wetland construction opportunities
- Continue to partner with sister State agencies to provide value-added enhancements to the natural environment through creative and cost-effective solutions
- Explore new alternatives and partnering opportunities
- Almost one linear mile of streams will be restored in FY2011, achieving the stream restoration program's five mile goal
- More than 3.5 miles of stream restoration will be accomplished as part of the Intercounty Connector (ICC)/MD 200
- 31 additional acres of wetlands creation projects are currently under design

SHA: Total Fuel Usage of the Light Fleet

This measure is tracked Statewide to monitor success in reducing consumption of gasoline through conservation strategies, including scheduled fleet replacements by higher efficiency vehicles.



Why Did Performance Change?

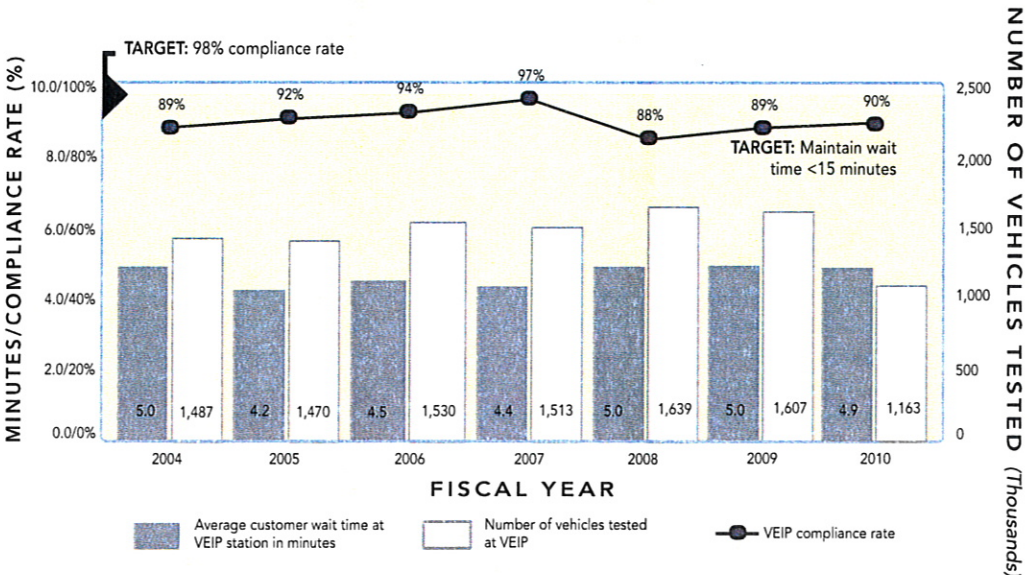
- Maintained the practice of using video conferencing to link central and regional offices to reduce auto trips for meetings
- Continued to enforce an automobile idling policy for all employees and consultants
- Purchased 12 mid-size pickup trucks to replace less efficient full-size pickups
- Instituted use of a new diesel additive, which enhances the quality of the fuel and leads to improved fuel economy
- Employees continue to take proactive measures to save fuel (e.g., carpooling)

What Are Future Performance Strategies?

- Continue to analyze historical trends to inform future fuel usage reduction initiatives
- Convert additional diesel engines to gasoline when appropriate
- Support actions to lower the cost-per-gallon of E85 fuel to reduce overall fuel costs
- Explore opportunities with the Department of Energy to expand and install more E85 fueling stations throughout the State
- Continue to acquire smaller, more fuel-efficient vehicles and hybrids as older vehicles qualify for replacement

MVA: Compliance Rate and Number of Vehicles Tested for Vehicle Emissions Inspection Program (VEIP) Versus Customer Wait Time*

Monitoring the VEIP testing compliance rate ensures system effectiveness and identifies vehicles exceeding allowable standards. Tracking the average wait time at VEIP stations ensures that the 15-minute average wait time requirement is met. Timely and efficient customer service helps the State meet Federal clean air standards by identifying polluting vehicles and encouraging regular vehicle maintenance.



* *14 counties offer VEIP tests: Anne Arundel, Baltimore, Baltimore City, Carroll, Harford, Howard, Queen Anne's, Cecil, Washington, Calvert, Charles, Frederick, Montgomery, and Prince George's.*

Why Did Performance Change?

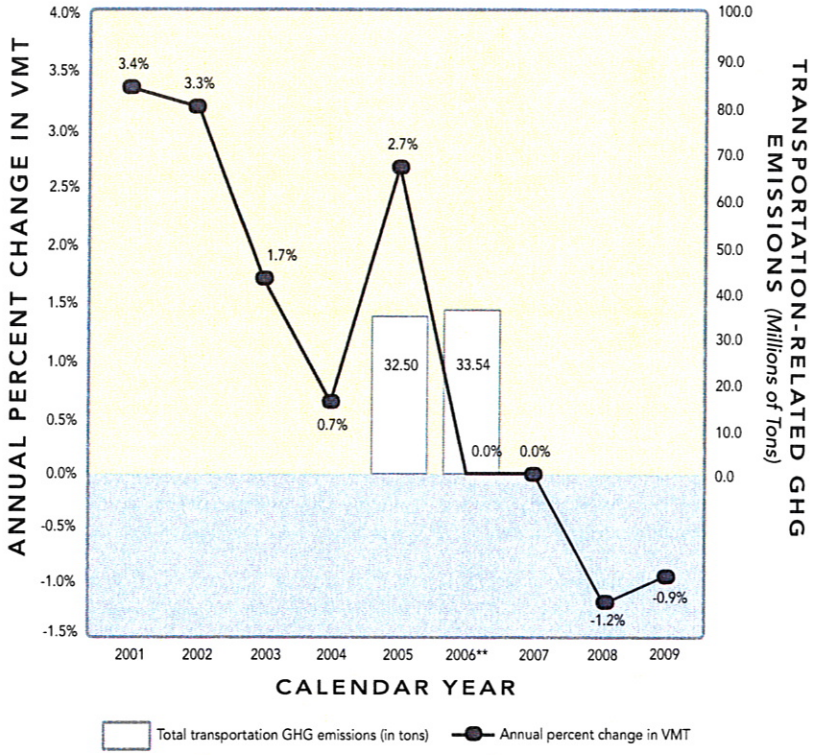
- Transactions declined due partly to a one-time reduction in VEIP transactions
- REAL ID license requirements compel individuals to provide proof of lawful presence in the United States
- The average wait time for customers at a VEIP station was 4.9 minutes in FY2010, well within the goal of an average wait time of less than 15 minutes

What Are Future Performance Strategies?

- Continue to monitor customer wait time to ensure minimal wait time
- Continue to explore new technologies and initiatives and consistently limit customer time at the VEIP stations
- Continue to monitor the number of registered vehicles in non-attainment counties to ensure VEIP testing compliance

MDOT: Transportation-Related Greenhouse Gas Emissions*

A reduction in overall Vehicle Miles of Travel (VMT) is one of several strategies that MDOT is pursuing to address climate change. Reducing VMT has other potential benefits to Marylanders, such as reduced congestion and improved travel time reliability. GHG emissions affect the temperature and climate of the earth's surface. GHG emissions primarily include carbon dioxide, methane, nitrous oxide, carbon monoxide, oxides of nitrogen, and non-methane volatile organic compounds.



** GHG emissions reflect the latest data available. The methodology for measuring GHG will be updated and incorporated into future Attainment Reports.*

*** Implemented a new methodology to modeling 2006 GHG emissions.*

Why Did Performance Change?

- Increased financial support for alternative modes of transportation at the State and local levels
- Implemented emission-reduction strategies in nonattainment areas to foster transportation alternatives to single occupancy vehicles
- Vehicle emissions decreased nationwide due to improved vehicle technologies and reductions in VMT caused in part by business and personal economic conditions

What Are Future Performance Strategies?

- Encourage growth in transit ridership through system enhancements and outreach
- Support GHG reduction strategies recommended by the Maryland Commission on Climate Change
- Promote mobile source emission reduction efforts and invest in clean transportation alternatives
- Pursue strategies to meet the GHG emission reduction goals of the Greenhouse Gas Reduction Act of 2009
- Implement the Clean Car Bill requirements and standards passed by the 2007 General Assembly
- Execute regional emission reduction strategies recommended by the Ozone Transport Commission
- Focus growth around transit stations to both increase transit ridership and reduce congestion, sprawl and GHG emissions through TOD
- Actively participate in the recently formed Transportation and Climate Initiative in the Northeast Corridor of the United States to reduce mobile source GHG

MDOT: Transportation-Related Emissions by Region*

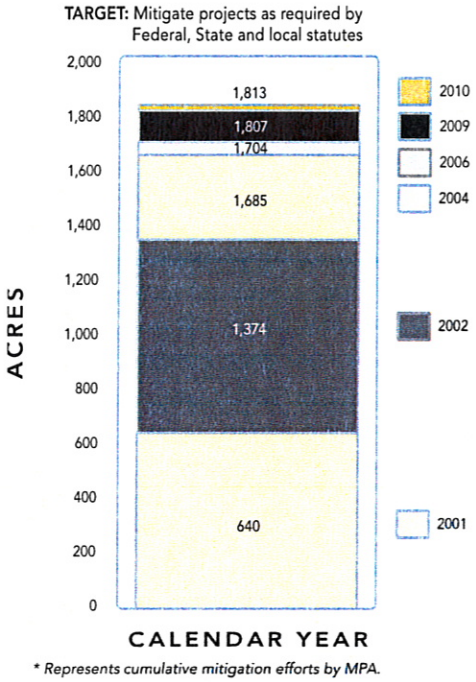
Reducing vehicle emissions improves air quality in compliance with Federal regulations and provides health benefits for Maryland residents.

PERFORMANCE MEASURE	REGION	CALENDAR YEAR			% CHANGE 2002-2008
		2002	2005	2008	
Volatile Organic Compound (VOC) Tons per Day	Baltimore	73.8	52.2	44.5	-40%
	Washington	66.6	47.8	40.5	-39%
Nitrogen Oxide (NOx) Tons per Day	Baltimore	185.3	145.3	97.1	-48%
	Washington	114.6	106.6	78.5	-32%
Carbon Monoxide (CO) Tons per Day	Baltimore	970.0	699.2	514.7	-47%
	Washington	845.2	628.1	454.2	-46%
Particulate Matter (PM) Tons per Day	Baltimore	1,061.9	936.3	623.4	-41%
	Washington	791.4	699.2	503.6	-36%

** Emissions calculated using MOBILE 6.2 and HPMS data.*

MPA: Acres of Wetlands or Wildlife Habitat Created, Restored, or Improved Since 2000*

MPA is in compliance with the various permits that are granted to construct projects needed for MPA customers (e.g., vessel or landside tenants).



** Represents cumulative mitigation efforts by MPA.*

Why Did Performance Change?

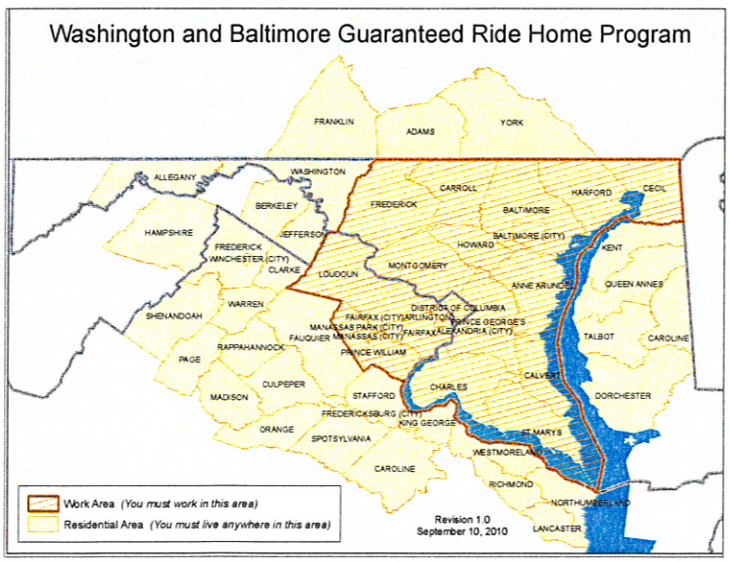
- Over 1,600 trees and 1,900 shrubs were planted and invasive species eradicated to improve about six acres at Hawkins Point as mitigation for paving for additional cruise parking
- Worked with local communities to develop mitigation for the Masonville Dredged Material Containment Facility (DMCF), which will include wetlands and upland habitat and a nature center

What Are Future Performance Strategies?

- MPA will create and improve wildlife habitat wherever appropriate and in conformance with permit requirements for construction projects requiring mitigation
- Continue environmental enhancements at Masonville, specifically the eastern and peninsula uplands
- Commence investigating long-term plans for Hart-Miller Island North Cell restoration and Poplar Island Expansion

Travel Demand Management

Maryland's transportation agencies promote Travel Demand Management (TDM) strategies as a way to provide an incentive to single-occupancy drivers to use public transit, carpool, ride a bike, walk, or telecommute instead of driving alone. Other strategies involve flexible work hours as a way to shift trips to times when roadway capacity is less constrained, helping to avoid further exacerbating capacity shortfalls during rush hours. By cutting down on single-occupant vehicle trips and reducing peak period congestion, TDM contributes to reduced emissions and improved air quality. Maryland supports a wide variety of programs and projects to promote TDM, including Commuter Choice Maryland, Commuter Connections, the Telework Partnership, TOD, and Statewide park-and-ride facilities. Park-and-ride facilities provide connections to transit, carpooling, and other shared modes, helping to lower single-occupancy driving. As shown in the map below, the Commuter Connections' Guaranteed Ride Home program was expanded in the summer of 2010 to include the Baltimore metropolitan region and St. Mary's County, Maryland. This expansion will provide program enrollment opportunities for residents who work in this region—as well as for the thousands of new workers at Fort Meade due to the BRAC process.



STATEWIDE PARK-AND-RIDE FACILITIES (ESTIMATED)

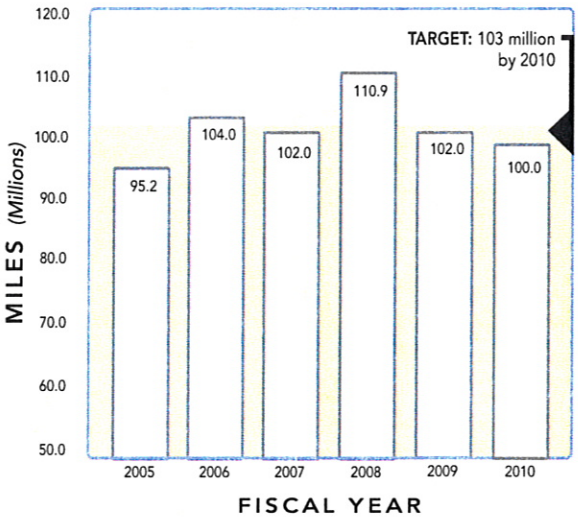
Agency	Total Spaces	Average Weekday Utilization*
SHA (2009)	11,955	7,060
MTA Operated (2010)	32,214	19,691
Transit Multipurpose** (2010)	7,704	5,541

** Facility usage fluctuates due to the economy; weather conditions; special events; emergencies; delays or shutdowns of parallel lines or modes; maintenance and repair; storage of plowed snow; increases in frequency, service, and capacity; and other factors.*

*** Includes facilities operated by MTA, Amtrak, WMATA, Penn Station in Baltimore, and Union Station in Washington, D.C.*

SHA: Reduction in Vehicle Miles Traveled Through Park-and-Ride Usage

By offering park-and-ride facilities, SHA provides commuters with an alternative to driving to their destinations and helps increase public transit ridership.



Why Did Performance Change?

- 321 additional spots were completed or are currently under construction around the State
- Park-and-ride usage declined with a drop in gas prices over the past two years
- Park-and-ride lots are at about 58% of capacity which is the normal long-term average usage rate

What Are Future Performance Strategies?

- For 2011, an additional 30 spots are already scheduled and several others are under design
- In coordination with freight planning initiatives, efforts are being made to adapt new or existing park-and-ride lots to allow overnight parking for long-haul trucking
- The I-68 lot at Christie Road will expand from 13 spaces to 30 spaces

2009-2010 MDOT & MTA TRANSPORTATION EMISSION REDUCTION MEASURES (TERMs)

Program	Program Description	Daily Reduction in Vehicle Trips*	Daily Reduction in Vehicle Miles of Travel*
Guaranteed Ride Home	Provides transit users or carpoolers up to four rides home per year in a taxi or rental car in the event of an unexpected personal or family emergency	8,680	227,428
Employer Outreach (Including Employer Outreach for Bicycles)	Supports marketing efforts to increase employee awareness and use of alternatives to driving alone to work every day	59,351	970,301
Integrated Rideshare	Promotes traveler information and other alternative transportation services to employers and to the general public. Commuter information system documentation is provided with comprehensive commute information, to include regional TDM software updates, transit, telework, park-and-ride, and interactive mapping	7,363	199,079
Commuter Operations and Ridesharing Center	Updates and maintains the Commuter Connections database for ride-matching services and provides information on carpooling, transit, Guaranteed Ride Home services, and alternative mode choices for the Baltimore/Washington metropolitan region	17,950	575,237
Telework Resource Center	Provides information to employers on the benefits of telecommuting and assists in setting up new or expanded telework programs for employers	21,866	413,703
Mass Marketing	Promotes and communicates the benefits of alternative commute methods to single-occupant vehicle commuters through the media and other wide-reach communications	2,577	69,274
MTA College Pass	Offers a subsidized monthly transit pass to full- or part-time students enrolled in greater Baltimore metropolitan area colleges or universities	3,535	27,925
MTA Commuter Choice Maryland Pass	Baltimore region program that allows employers to purchase transit passes and vouchers for their employees. Employers can subsidize these for their employees or allow employees to purchase passes or vouchers with pre-tax income	8,950	150,991
Transit Store in Baltimore	Provides customer access to transit information and for purchases of transit passes. Some 15-20% of total transit pass sales occur through this outlet	2,151	36,295

** The impacts shown reflect the latest data available for each of the measures. New data will be available when the TERM Evaluation Project is completed in 2011.*